G. N. S. 55]

Previous references

1900-'01

(Edn)

File No. 94.

Serial Nos 1-8

Later references

Ed 60-01

GENERAL AND REVENUE SECRETARIAT

Serial Nos

~~Part~~ B for June 02

SUBJECT

Establishment of an Industrial School at Doddaballapur

Indexed

Countermarked H&B

GPB—10 000—26 3-15

1 Note

Petition of Ramakka and others of Dodballapur town, praying for the establishment of an Industrial School

It is stated by the petitioners that, at the distribution of prizes in the Anglo Vernacular School Dodballapur, held on 24-12-'00, "the Dewan expressed his opinion "that the want of an Industrial "School was greatly felt, and that "its establishment was a necessity"

(vide Petition d 10-4-01 No. 2160) The above petition was referred to the 2d Councillor with the followings remarks by the Dewan

" I shall be glad if this "matter is favourably considered "and action taken. As weaving "industrial branch, I have "every reason to hope, will "be successful in Dodballapur

The petition was forwarded for favour of a report to the Dfl of Edn, under the orders of the 2d Councillor

The Dfl in his Docket No. 10238/4412 d 11th May 1901 said

that "Industrial schools
have not been established
in all District Head Quarters yet"
and that "it would be premature to
"establish such a school in
"Dodballapur" the I.G. was
again requested to report "on
the merits of the application" the
I.G. in reply states that it is
the addition of the fly-shuttle
to the native looms which is
wanted at the present moment
to improve the condition of the
Weavers, that the subject is one
of some difficulty, and that
he wants to study with what
results the same improvement in the
hand looms has been made
in Bengal before he makes
definite proposals for the establishment
of an Industrial school at
Dodballapur

Submitted for orders

to the 2nd Member 7/11 2/1907

The further reports

3

promised may be
awarded

3/9

Recd
3 IX 1901

4/9/01

Under Mr Bhabha's letter
No 628/28 dtd the 25th
January 1902.)

Edn
60-01

Vide Ed. 7 60-01
for 01 closed

(1)

1901
~~189~~

No 2160

Name of Petitioner Ramappa and others of

Village / Taluk } Dodballapur

District Bangalore

Date of Arzi 10-4-01

Date of Receipt 22-4-01

Date of Disposal

No of Enclosure Nil

ABSTRACT

The petitioners state that at the distribution of prizes in the Anglo Vernacular School, Dodballapur, held on 24/12/00 the present Diwan expressed his opinion that the want of an Industrial School was greatly felt, and that its establishment was a necessity and that they have been every day expecting an order in the matter

They pray for an e

Orders on the petition —

To the Second Councillor —

I shall be glad if this matter ... favorably considered and action taken. As regards the Industrial branch, I have every reason to hope, will be successful in Dodballapur

Judy P N K
21/4/01

Forward this to the Inspector General of Education for favor of early report.

Judy C S
21-4-01

Rec'd 2/5/01
Off-on tour
Entd/mtrp
JG 3/5/01

This was perused on 22/4/01
Today it goes to the Secretariat
There has been a delay of 10 days.
Who is the whose fault is this.

3/5/01

Rl 1652 — 7-5-1901

Rl 1652

MYSORE DEWAN'S OFFICE

PETITION DEPARTMENT

OFFICIAL MEMORANDUM

The accompanying ~~Appeal~~ Petition Registered No 2160 dated 10 4 01 received at the Dewan's Office from Ramappa & others of Doddaballap praying for the establish-ment of an Industrial School at their place

is forwarded ~~together with~~ its enclosure, to the ~~Deputy Commissioner of~~ Inspector General of ~~District;~~ Ed for ~~disposal~~ favour of early report.

Draft C,

By order,

for Secretary

BANGALORE, 6 5 1901

3 5/01

Rect 21/5

Rep. put up

21 5 01

Submitted to Secy

21 5 01

The report was called for under the order of the 2nd C

21/5/01

Submitted to the 2nd Councillor

8/6/1901

10 10/6/01

Rec'd 10/6/01

Issued 11/6

11/6/01

I do not follow that because Industrial schools have not yet been established at all Head Quarters of Districts this is no reason why existing schools at el-Hadda Bullapura & Kolar should not be taken over & managed by the Head Quarters Staff. It is requested that the sanction may be given upon the question

11/6/01

(3)

Edn 781

INDIA OFFICE
GENERAL DEPARTMENT
MAY 20 1901
No. 2379
1901

From

The Inspector General of Education in Mysore

To

The Secretary to the Govt of Mysore, General and Revenue Depts, Bangalore

Dated

Despatched 11th May 1901.

Received

General No 10238

No 441

No of Enclosures

With reference to official memorandum No Pt 1650 of 8th May 1901 forwarding for early report a petition from Ramappa and others of Doddballapur, I have the honour to inform that Industrial Schools have not been established in all District Head-quarters yet. Under these circumstances it would be

premature to establish such a school in Doddballapur.

H. J. Stokes
Inspector General.

(4)

1901

From

The Secretary to the Govt of Mysore,
General and Revenue Departments

To

The Inspector General
of Education in Mysore
Bangalore

Dated 12th/15
Despatched 15 June 1901
Received

General No Pet
No 1911

Enclosure No

~~With reference to~~ this letter
No 10238/441 of 11th May 1901
reporting on the petition of
Ramappa and others of
Doddballapur praying the ho-
-nour to observe ~~invite his attention~~
~~to the fact~~ that there is an
Industrial school established at Mel.
-Kote, which is not the head.
-quarters even of a taluk,
that because Industrial
schools have not yet been
established

Applying for the establish-
-ment of an Industrial school
at Doddballapur

Central Jail Press, Bangalore —20-7 99 —602

established at all the
head-quarters of districts,
it does not follow, that
it is premature to establish
one at Dadballapur and
to request that he will be good
enough to enquire into and
report upon the merits of
the application referred to
above

By Order

Draft
C2

For Secretary

submitted
27801

(5)

Ed 92

Edn No 81] 2723 / 27-8-01

1900 1901 Pet 89

Transp^d to Ed & Dep^t

31/8/01

Recd 29/8/01.

From H J Bhabha Esq. M.A.,
~~The~~ Inspector General of Education
in Mysore

To H V Nanjundayya Esq. M.A. B.L.,
Secretary to the Govt of Mysore
Genl & Rev Depts
Bangalore

No 2024
Dated 75
Received 24th August 1901

No of Enclosures

Subject

Submitting a report regarding the establishment of an Industrial School at Doddballapur.

Ed
26 " "

Rec'd 27/8 379

Rep. put up

All
29-8-01

(5)

Edn 81]

No 2024
75
Dion

OFFICE OF INSPECTOR GENERAL OF EDUCATION IN MYSORE
Bangalore, 24th August 1901

H J BHABHA, ESQ., M A,
Inspector General of Education in Mysore,

To

H V Nanjundayya Esq, M A, B L,
Secretary to the Government of Mysore,
General and Revenue Departments,
Bangalore

SIR,

With reference to your D O No Pet 1911 dated 15th June 1901 and subsequent reminders, I have the honour to inform you that I visited Doddballapur last month and though I spent two days there none of the petitioners who were fully aware of my halt came to me to represent their wishes The petitioners' request for a technical school is too vague and undefined to receive immediate attention. The only kind of technical school suited to Doddballapur is a weaving school with a carpentry class attached I visited several houses of weavers to see them at work and was

Q5.6°

Pahl — (6)

Calcutta — 1902

Ghosh, Chaudhuri & Co

Wood and Iron Workers

Workshops —40 Harrison Road *Calcutta* and Chinsurah

Show Room - 168 Dhurrumtolla Street

A TESTIMONIAL

Dr C A MARTIN L LD
(*Late D re tor of Pub'ic I ss truction B ngal*)

I ha e been to the workshop of the Chinsurah Cutlery and Iron Works ca ried on under the proprietor ship of Babu Satish Ch nd a Ghosh and been ery much pleased with what I have seen The proprietor rece ved a two years training in the En g nee ing department of the C E C llege at Sibpur and under stands both CARPENTRY nd BLACKSMITH S work The articles turned out in the workshop appear to me to be of e cellent q lity and moderately priced

I am glad to learn that some encour ment is already gi en to him by P W D and by the D strict Judge of Hoo hly

Altogether I think that the Chinsura Cutle y and Iron Works deserve encouragement at the hands of Public as well as private bo lies

The 29th February 1893

Managing Partner SATISH CHANDRA GHOSH —Ex Student of the Seebpore En neering Colle e and who has b en in busine s for the last TEN YEARS and ha th honour of b ng the recip ent of testi monial f om —

Hon ble M C E B ckland c I E Ch ef Se retary Ben al Government
D A Pedler F R S D re tor of Publ c Inst uction Ben al
Hon ble E Giles D recto of Public Instruction Bombay
C J S Faulder E q C S Comm r Bu dwan Divn ;
E B Havell E q Pr ncipal School of A t Calcutta
C Stevenson E qr c s Comm s ioner O is a Division ;
And Several d stin u shed m mbers of the Civil Service

To

The Chief Secretary
To The Government of Mysore

Sir,

We most humbly and respectfully beg to send you are sheet Price list of furniture, which Contains only Copy of two important orders that have been executed under our management

We are still furnishing the Hastings House at Alipur (Calcutta) which it may be known to you, is intended by the Viceroy to be the guest house of our Indian chiefs, Princes and Noblemen

We have been entrusted with many other important works and our reputation as good workers has been so far established that we can with some confidence give you assurance that we shall be able to give you entire satisfaction in the execution of any orders however large or difficult that may be entrusted by you or by His Highness' state

We are prepared to undertake orders for furniture that may be required for furnishing the lodging of His Highness at Delhi during Coronation

Awaiting your kind orders

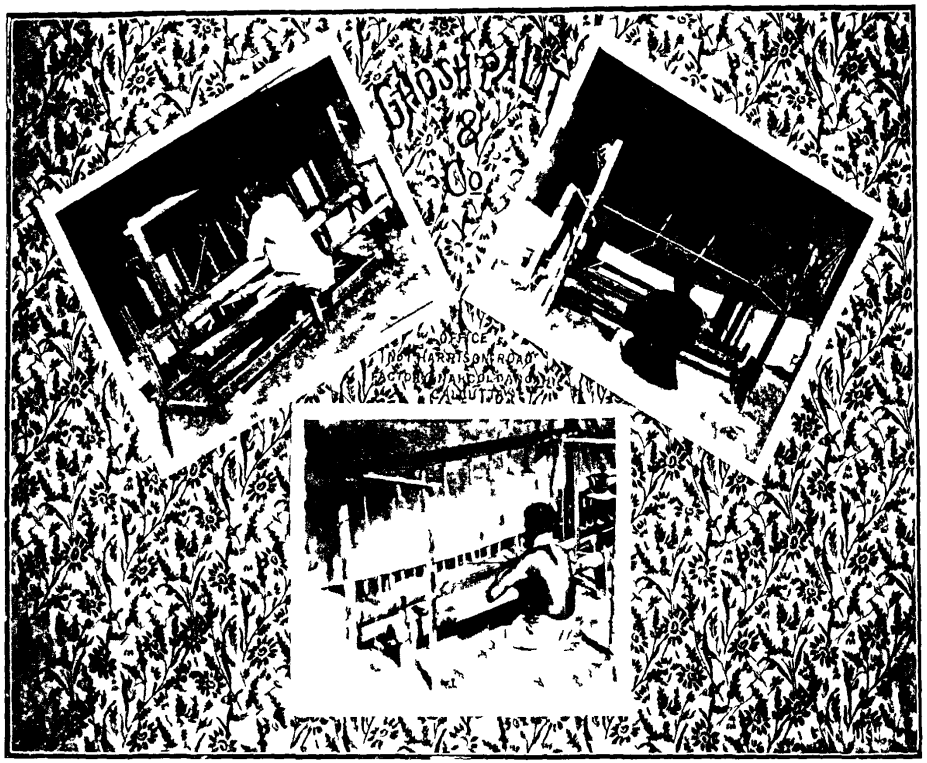
I have the honour to be
Your most
obedient Servant
Satish Chandra Ghosh
Manager

THE INDIAN MECHANIC STORE.

Sample

Complete Fly Shuttle Loom Rs 50
Complete Lay Rs 15
Shuttle Rs 3

Illustrated price list of Weavers Carpenters, Smiths & other Indian artizans Tools & Machineries to be published shortly



For Weavers

Complete Fly Shuttle Loom, with frame Rs ~~35~~ 40/-
The same without frame, to be fixed in the ground Rs 25
Complete Lay Rs 12
Lay without shuttle & reed Rs 8

Proprietor,
Surendra Nath Palit

Manager,
Satish Chandra Ghosh

Office 1 Harrison Road CALCUTTA

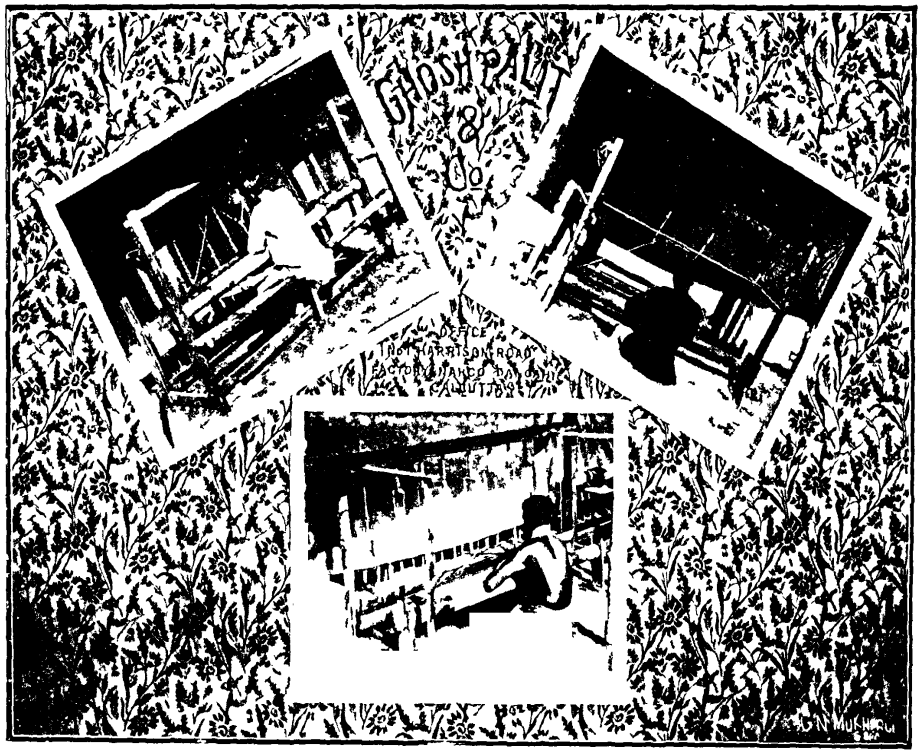
MOH L SS
S P A D NJA ST

THE INDIAN MECHANIC STORE.

Sample

Complete Fly Shuttle Loom Rs 50
Complete Lay Rs 15
Shuttle Rs 3

Illustrated price list of Weavers, Carpenters Smiths & other Indian artizans Tools & Machineries to be published shortly



For Weavers

Complete Fly Shuttle Loom, with frame Rs ~~85~~ 40/-
The same without frame to be fixed in the ground Rs 25
Complete Lay Rs 12
Lay without shuttle & reed Rs 8

Proprietor,
Surendra Nath Palit

Manager,
Satish Chandra Ghosh

Office 1 Harrison Road CALCUTTA

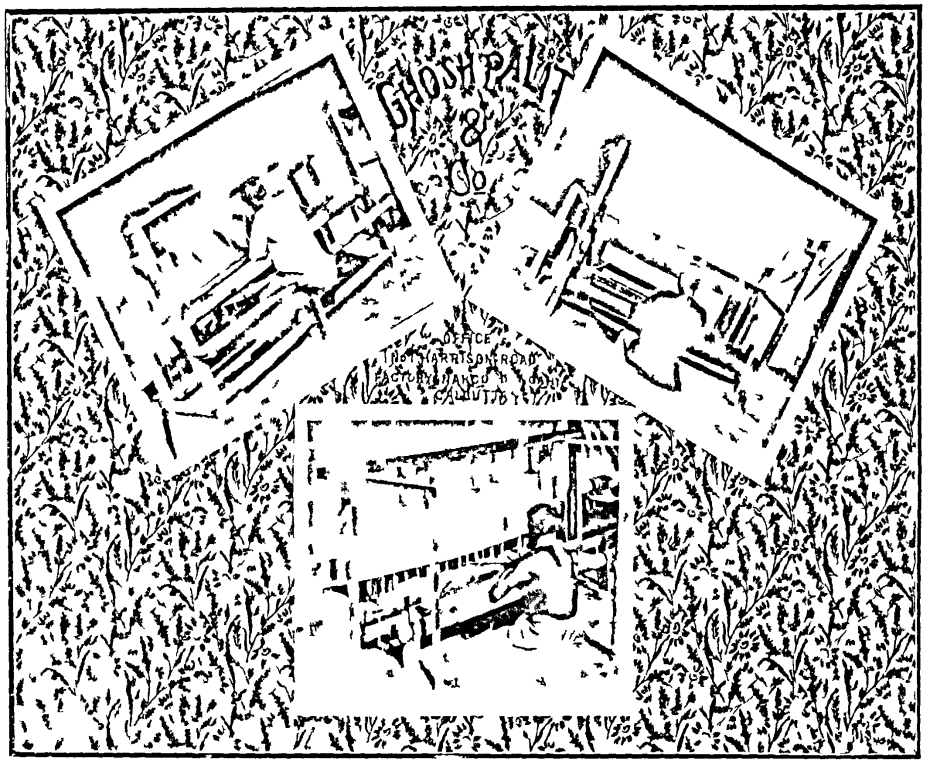
M H L S
I S PA A DANGA ST

THE INDIAN MECHANIC STORE.

Sample

Complete Fly Shuttle Loom Rs 50
Complete Lay Rs 15
Shuttle Rs 3

Illustrated price list of Weavers, Carpenters Smiths & other Indian artizans Tools & Machineries to be published shortly



For Weavers

Complete Fly Shuttle Loom with frame Rs ~~35~~ 40/-
The same without frame to be fixed in the ground Rs 25
Complete Lay Rs 12
Lay without shuttle & reed Rs 8

Proprietor,
Surendra Nath Palit

Manager
Satish Chandra Ghosh

Office 1 Harrison Road CALCUTTA

MO LA SS
S P A DANJA ST

P (7) 1902

To

Messrs Ghosh Chaudhuri Palit & Co

40, Harrison Road

Calcutta

No. 19798
No. Mis 2952

Dy 27th June 02

Referring to their letter without date (rec'd on the 5th instant) in which they have requested us to forward to the address noted below a list of the Fly-Shuttle-Looms (with model or drawing) advertised in their price list, ~~and to the above address~~ as per Mr. Mazumdar's order.

Yrs 25/6/02

Offg Secy

Offg

Secy

17/6/02

(9) Jus 28

OFFICE OF T
1902 No 87
-5 JUL 1902
DEPT

From Mrs Ghosh, Palit & Co
Calcutta

To THE SECY TO THE GOVT OF MYSORE,
GEN & REV DEPTS

Dated 30 June 1902

Despatched

Received

General No
No

Enclosure No

Forwg a few copies of the price list of fly shuttle loom & the measures — Mr Havell, Pl. Govt. School of Arts, Calcutta —

References to be marked

MGCPB—5 000—24 7 01

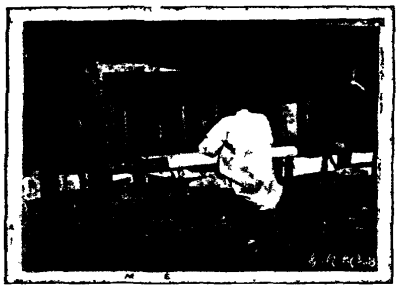
(8)

Office 1 Harrison Road CALCUTTA

GHOSH, PALIT & CO.

"G"

Wood and Iron Workers and Government Contractors



Dealers in Improved Tools and Hand Machines for Indian Artizans

Specialities for Hand-Looms, Fly-Shuttle Lays, Healds, Reeds & Shuttles

Weavers trained in the art of Weaving with Fly Shuttle Loom

THE INDIAN MECHANICS' STORE

30th June 1902

L. Anantasame Rao Esq B.A
Offg Secty To The Govt of Mysore
Genl & Rev Depts

Sir

With reference to your letter No 19798 of 27th instant, we beg to send in a separate packet 2952 a few copies of the illustrated price list of Fly Shuttle loom and one of Mr Havell's, (Principal of the School of Art) memorandum

Soliciting your kind patronage

We Remain Sir
Your most Obdt Servants

Ghosh Chunder Palit & Co

(8)

THE INDUSTRIAL DEVELOPMENT OF INDIA

A Lecture given before the Indian Industrial Association by MR E B HAVELL *Principal Government School of Art Calcutta*

THE industrial development of India is a question which has so many aspects—each of which can be viewed from a great many different standpoints—that it is hardly surprising to find a great dissimilarity in the opinion and judgment of different authorities In these circumstances it is wise to distrust those who with loud voice, proclaim a sure and simple solution of all the difficulties of the subject and on the other hand we must avoid the even greater danger of believing that a *laissez faire* or let things alone policy is the only possible one For the public it is more important to obtain a general idea of the direction in which progress may be expected and to understand the evil effects which may come from taking a wrong direction than to attempt to enter into technical details which only experts can properly appreciate So I will not in this lecture inflict upon you many technical details The industrial development of a country depends partly on the state of its natural resources partly on its geographical situation and physical characteristics partly on political advantages or disadvantages and partly on its manufacturing capacity England's present commercial prosperity has been founded partly on her natural wealth of coal iron, chinaclay and other raw materials for manufacture partly on her position as the great carrying power of the world and partly on the inventive genius of her artisans which gave her the start of other countries in mechanical industry In natural resources and physical and geographical advantages India is certainly very richly endowed Politically India is a partner in the great British Empire —a position which secures for her at least the internal peace justice and settled government which are the foundation stones of all commercial prosperity It is chiefly in her position as a manufacturing country that India has lost ground in the last two centuries Now I do not propose to make more than a passing allusion to the exploitation of the natural resources of India because in the first place, it is a subject large enough in itself for many lectures and secondly because the ways and means of it are not so much the subject of controversy as other questions are Progress in this direction will always be slow until scientific and technical education in this country have advanced beyond the theoretic smattering required for academic degrees into the higher plane of sure and practical knowledge which is generally only reached after academic distinctions are won and until some means have been discovered to make the field more attractive to private enterprise and capital than it is at present A great difficulty no doubt is that native capital generally finds highly profitable and safe investments in long established traditional grooves from which it is loath to depart for the less known and less certain ways of modern scientific exploitation I would only venture to observe that the self reliant character of Englishmen and the traditional policy of England perhaps inclines us to expect too much of private enterprise in India Private enterprise in this country has not yet acquired the same robust and independent constitution as it has in Europe or in the great English colonies Neither has the glowing prospects of the Company promoter quite the same power of attracting capital in India as it has in London and other great financial centres The recognition of these conditions may be seen in the guarantees for railways and other means by which the paternal government tries to put more heart into the timid Indian investor but when we observe the much more strenuous official support which is given to private enterprise in most European countries and in America, I venture to think it would be well for India if we departed a little more from our traditional policy in this matter

1

I will pass over geographical physical and political aspects of the question and come to the main point I wish to deal with namely the development of the manufacturing capacity of India We know that in former times this country held a commanding position in the textile industries of the world India not only supplied all her own wants in textiles but had a very flourishing export trade We know also that India has lost that position through improvements made in textile apparatus and machinery by European weavers above all by the application of steam power to textile manufacture Now I have continually noticed that the moral which most people draw from the history of the development of European manufactures is that if India is to regain its position as a great manufacturing country it must follow in the footsteps of European industry revolutionise the working conditions of its traditional handicrafts turn the village workshops into steam factories and give up hand labour for mechanical power They start on the assumption that India's salvation depends on her artisans joining in the great competition for export markets which is going on in Europe and America They take it for granted that pocesses which have become necessary in Europe must be necessary in India where totally different conditions prevail If these two assumptions were correct I fear the prospect for India would not be very bright I think no friend of India could view with unconcern the prospect of a coming era of congested cities and depopulated rural districts of unhealthy conditions of work of struggles between capital and labour uneven distribution of wealth social unrest and all the attendant evils of the great industrial development in Europe and America Besides the Indian artizan is unfitted both by disposition and habits from entering upon such a struggle and generations must elapse before he could acquire not only the technical knowledge but the business methods and business capacity necessary for success in an industrial struggle in European markets The Japanese on the other hand who seem to be preparing to compete in European markets with European methods are far better equipped in all respects than Indian artisan They are more self reliant they have generally much greater technical skill greater capacity for adapting themselves to different methods of work more enterprise and determination I venture to prophesy that unless India rouses herself to greater efforts in industrial improvement she will find Japan a more formidable commercial and industrial competitor than either Europe or America China too if she should one day wake from her long sleep could put into the field an army of highly skilled patient industrious workmen which could defeat the Indian artisan at almost every point

The idea that the handicraftsmen of India must look abroad to foreign markets the requirements of which they are totally ignorant of when there are over 300 000 000 customers at their own doors whose wants they know and understand seems to me altogether illogical First let them struggle to recover the home markets they have lost If they succeed in that they may possibly acquire the skill and knowledge necessary for attempting the other If they do not succeed in one enterprise in which all the advantages are on their side is it likely they will win in another in which they will have to face every disadvantage' But you may ask is it possible that Indian workmen can stand against foreign competition without copying foreign methods of trade and manufacture? That is one of those questions with cannot be answered by a simple yes or no It depends upon circumstances But I will assert this that those who believe that hand labour in manufacture is becoming a thing of the past are entertaining a delusion fatal to real progress in India Nowhere in the world is there a more splendid field for the development of hand industries than there is in India If the same amount of thought enterprise and capital had been spent during the last 50 years in developing the handicrafts of India as have been spent in establishing mills and factories in the European system I do not hesitate to affirm that India would have been richer by crores and crores of rupees and we should hear little to day of the decline of Indian industries

Hand manufactures can be developed and improved quite as much as mechanical industry A country like India which possesses hundreds of thou sands of skilled handicraftsmen and where the cost of living is many times cheaper than it is in Europe possesses a source of potential wealth capable of *almost indefinite expansion*

It is the most suicidal and fatuous policy to assume that the skilled Indian handicraftsman must be turned into a cooly minding a machine Yet this is the policy which many people seriously put forward as the only means of reviving Indian industry

Now I will leave theoretical discussion and enter into practical details There are one or two points in the present condition of the Indian textile industry to which I should like to draw your special attention The first is that though the hand looms used in India to day are the same as have been used for hundreds of generations and hardly any attempt has ever been made to improve them yet the Indian hand loom industry has by no means been entirely crushed by all the marvellous skill which has been brought to bear upon the construction of the European power loom No doubt it is in a very depressed condition but it is still next to agriculture the most important of Indian industries Two thirds of the artisan population of India are at the present day hand loom weavers and the value of the annual outturn of hand woven fabrics is a matter of crores of rupees We know that the very keen competition between European manufactures has reduced their profits to a comparatively small margin If then the mechanical efficiency of the Indian hand loom could be improved say by 15 per cent which would be equivalent to a 15 per cent duty on the imports of foreign piece goods it is reasonable to suppose that the Indian weaver might retrieve his position to a very large extent Now it is not only probable but an indisputable fact that the ordinary Indian hand loom can be made more effec tive not merely by 15 per cent but by nearly 100 per cent There are many kinds of hand loom in use in India from a primitive arrangement of a few sticks to the elaborate and ingenious apparatus used for Benares kincobs and textiles of a similar class The loom of the ordinary kind or that used for cotton clothes of medium quality is mechanically as effective an apparatus as the European hand loom was 150 years ago a time when the Indian weaver not only had it all his own way in India but was a formidable competitor in the European market But since that time while the Indian loom has remained the same the European hand weaver by simple contrivances, which cost very little has im proved his loom in efficiency by nearly 100 per cent The chief of these im provements is called the fly shuttle a simple but ingenious arrangement by which the shuttle instead of being thrown by hand is jerked across the warp by pulling a string attached to a lever It was invented by an English weaver about the middle of the 18th century and the discovery gave to England the supremacy in the textile markets of the world—a position she has maintained since It has always been a matter of astonishment to me that after a lapse of a century hand a half this invention is almost unknown in India outside the great mills where the principle of it is applied to the power loom The sewing machine which is a much more recent invention is known in almost every Indian village There are goldsmiths and jewellers brass smiths blacksmiths and carpenters all over India who use European labour saving appliances and improved tools but practically nothing has hitherto been done for the improvement of the most important of all Indian handicrafts European ladies have introduced the sewing machine European firms and workshops have taught the goldsmith brass smith blacksmith and carpenter no one has hitherto helped the Indian weaver and he has not like his European fellow workman been able to help himself In the Madras Presidency where I have inspected thousands of native hand looms I never discovered a fly shuttle except in the Basel Mission weaving establishments and a few other mission schools The use of it never seems to spread among the weavers outside A short time ago I discovered through a

report written by Mr Collin in 1890 that it was used by a prosperous colony of weavers in the Hughli and adjacent districts, chiefly at Serampore How they came to adopt it I could not ascertain but probably some one during the time of the Danish Government at Serampore had imported a European hand loom and taught the weavers how to use it You will be glad to hear that the Bengal Government at my suggestion are taking steps to make the use of the fly shuttle known throughout the province At present it is in partial use in 8 districts out of the 48 No doubt long and patient efforts will have to be made to persuade the mass of the weaving population to overcome their dislike to innovations even though the benefits to be derived from them may be obvious I would strongly recommend that the Indian Industrial Association should make this a prominent part of their programme Your Association could easily form local Committees to assist and supplement Government efforts If you succeed as I am sure you would succeed in bringing the fly shuttle into general use among the weavers of Bengal you would do a great service to your country The mechanical improvement of hand looms is in my opinion one of the most important industrial problems to be dealt with in India and perhaps one of those which presents the least difficulties I only hope that other Governments will follow the lead of Bengal in this matter and that District Boards and Municipalities all over the country will assist in reviving the great Indian hand loom industry It is my firm belief that there is hardly a more safe and lucrative field open for Native and European capitalists in India than there is in the development of hand loom weaving Hand loom factories are profitable in Europe they should be much more so in India where conditions are so much more favourable It is commonly believed in India that the hand loom industry in Europe has been entirely supplanted by the power loom This is very far from being the case In France Switzerland and Italy there is still a great deal of silk weaving done by hand In Scandinavia you will find the hand loom in every village and the peasant women will not only weave their own linen but spin the thread they require for sewing In England the great centre of the power loom industry there has been lately a remarkable revival of hand loom weaving Hand loom factories are being established in many places where formerly every thing was done by the power loom The demand for skilled weavers is greater than the supply I should like to read you a few extracts from a lecture given by Miss Clive Bayley, before the Society of Arts London a few years ago The recrudescence of the silk trade in the hand branches has drawn its workers away from the congested city streets into the purer air and cheaper regions of Suffolk and Essex Ipswich Braintree Sudbury, and the villages round are becoming centres of renewed activity, and if you want hand weavers you will find it pretty well impossible to get them

'Given the possibility of obtaining good weavers in the silk trade the proceeds of a hand factory are quite as great as those of a steam factory The outlay in machinery in the latter instance is far greater than in the former The time and labour of getting the machinery under weigh is for short lengths far more in a power loom than in a hand loom and the work of intricate patterns is infinitely superior when placed in the hands of a practised weaver than when entrusted to automatic machinery Hand loom firms rarely fail—power loom firms are not nearly I am told so fortunate in this respect But the great deficiency is workers for after the first conquest of machinery the product of hand labour was discounted and the exaggerated importance and value of time seemed to paralyse industry"

The superiority of work in the hand looms will be a matter of positive proof and can be and is generally becoming a subject of interest The better the class of hand workers we train, the greater will be this difference, and the more potent will be the industrial revival which reconquers what was supposed to be an abrogated kingdom"

One large silk firm is already raising the roof of its establishment in order to accommodate a large number of such hand working apprentices Another applied though for what exact purpose I have not discovered for 500 similar workers Another, and I believe a linen firm was reported to need 2 000 workers We have however barely touched on that all import ant point—wages What can a hand weaver earn? As a matter of fact a hand weaver is paid better than the watcher of machinery labour He is also better paid now than at the end of the last century

If the hand loom can compete with the power loom in England where the cost of skilled labour is many times greater than it is in India where the supply of trained weavers is very limited and where the most perfect weaving machi nery worked by steam and electricity is in use what a much geater prospect must there be for it in India where you have an unlimited supply of the most skilful hereditary weavers content with earnings of four annas to eight annas a day!

I do not wish you to imagine that hand weaving can hold its own against the power loom to an unlimited extent Both hand labour and machinery have their limitations But there are splendid possibilities open for the hand loom industry in India and it is a preventible loss to India that the skilled weavers should day by day leave their looms and add to the already overgrown agricul tural population

With proper looms and proper instruction the Indian weaver could not only recover a deal of the lost internal trade but take a leading position in the world in hand woven fabrics

There are many branches of Native industry in which simple mechanical improvements and labour saving devices can be introduced by means of which production can be increased or improved to a very large extent But as I do not wish to enter into too many technical details I will only allude to one other Every one who is familiar with native brass work knows how all the vessels lamps and other things made by the process of casting are by the native method, laboriously moulded by hand in wax patterns which are destroyed in the casting so that only one object can be cast from one pattern This process is also used in Europe but only for single works of art of value such as a bronze statue or bust For ordinary industrial purposes there is a simple process of casting in sand from wooden or metal patterns which effects an enormous saving of time and trouble because the patterns instead of being destroyed in such casting can be used over and over again

Shortfly before I left the Madras school of Arts I introduced the teaching of this method into the metal work class there The subject was dropped after wards but I am glad to hear that Mr Chatterton who is now in charge of the School has taken it up again I must say that if District Boards and Muni cipalities would take up questions of this kind and employ trained workmen to go round to the various industrial centres and give practical demonstrations of improved processes and apparatus they might do much more than Schools of Art and technical institutes ever will be able to accomplish in spreading techni cal knowledge among the artisans of the country I would commend this sug gestion to the Committee of the Indian Industrial Association Before I have finished I will allude briefly to Indian Art industries a subject which was dis cussed before you not so very long ago by Mr S J Tellery In some ways Art—work must be treated quite differently to ordinary commercial productions but there is one principle which is common to both—you must establish the home market on a healthy basis before you look abroad for foreign markets We have heard a great deal lately of the decline of Indian Art industries but in nine out of ten of the proposals which have been made for reviving them this principle has been entirely disregarded Both official and private exertions have been directed almost entirely towards the encouragement of the export trade I must

repeat again and again my strongest conviction that this is an entirely mistaken policy First find out and remove, if you can the causes which have led to the degradation of Indian Art in India and the export trade will revive and expand almost automatically On the other hand unless effective measures are taken, before it is too late to give back to Indian Art the prestige it has lost in India and to remove those artificial impediments to its natural development which have existed so long it needs no prophet to foresee that the export trade in Indian Artware will die an unnatural death I have tried to explain in two papers published in the Calcutta Review my reasons for believeing that the decay of Indian Art is mostly due to the fatal mistake which has been made in Indian public buildings in supplanting the living traditional styles of Indian Architerture by imitations of modern European scholastic styles Architecture is the principal door through which the artistic sense of the people finds expression If that door is mostly choked with rubbish as it is in India is it surprising that art industries decline? I know that this theory is not easily grasped by those who imagine that art knowledge means only a knowledge of pictures and that this knowlege can be acquired by going to exhibitions or by making a picture collection in the same way as collections of postage stamps or bric a brac are made If I wished to estimate the value of any ones pretensions to art knowledge I would look first at his house his tables and chairs his carpets and everything connected with the routine of his home last of all at his pictures for if he does not understand the elements of art it is not likely that he will have a correct appreciation of higher and more abstruse principles In England there has been lately a remarkable art—movement which is likely to have a most important influence on public opinion since it has been strong enough to persuade that venerable but somewhat effete institution the Royal Academy to modify some of its hoary traditions

While England and Europe generally are beginning to free themselves from the corrupt artistic influences of the last two centuries it is not encouraging to find that Indian Art feeling is far more debased in the great centres of European civilisation than it is in remote towns and villages But why I will ask do Indians wait for Government initiative in the matter? No one compels you to go on following what is now recognised as the depraved European taste of several generations ago which unfortunately was imported into India long before art schools were established either in England or in India You have magnificent examples of your own architecture and art to follow Government would hail with the greatest satisfaction any efforts you made to rescue Indian art from the ruin which is overtaking it Queen Victoria herself employed the Indian artisans whom India neglects to decorate her Palace at Osborne in Indian style Why then do the Princes artistocracy and wealthy men of India continue to build those monstrous and ridiculous palaces and mansions in imitation of the most corrupt period of European art to the detriment of the art industries of the country and to the disgust of every one whose artistic sense is in any degree developed?

Happily there are not wanting signs that a better time is coming for Art in India

Indian art has suffered much in the past from misunderstanding and neglect but it is fortunate now in having found a warm friend and sympathiser in His Excellency the Viceroy In the scheme for the Victoria Memorial there is a unique opportunity for giving back to Indian architecture and art some of its lost prestige Every one who has studied the history of art knows how often it has happened that the building of a great national memorial has been the beginning of a epoch in the art of a country If the Victoria Memorial becomes a monument from which future historians will date the revival of Indian architecture and art surely it will be the most noble we could erect to the memory of the Good Queen

Babu Prativashankar Chaudhuri, Secretary of the Association said he wished to bear his humble testimony to the fact that during journeys he had made through the Pabna and Faridpur districts he had come across weavers who were using the new hand looms which had been partly introduced into these districts These people assured him that before they were hardly able to earn three or four rupees per mensem whereas now they were earning easily four or five rupees by the use of the new hand loom At Koostea he saw some thousands of fly shuttles at work the weavers using which were able to earn from nine to ten rupees whereas formerly they were only able to earn five rupees He was sure these new appliances would be appreciated by the general public of India and would confer great benefit on them

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THE FLY SHUTTLE LOOM

I —Advantages of the Fly shuttle —The fly shuttle has three advantages *first* it enables the weaver to weave much faster than he can when he throws the shuttle by hand A fly shuttle loom can turn out nearly twice as much work as the ordinary native loom in the same time and of equal quality *Secondly* a weaver by means of the fly shuttle can weave cloth of much greater width than he can in the native loom In the Pabna and Faridpur districts the weavers since the fly shuttle loom has been introduced there have been able to double their earings by making a kind of bed sheet which finds a ready sale among the natives *Thirdly* it is an extremely simple and inexpensive improvement, which can be made by any carpenter and adapted to the ordinary native loom It can be used in both silk and cotton weaving At Serampore it is used for silk and also for cotton from counts 80s up to 120s For very coarse counts of cotton it is advisable to modify the Serampore loom so as to adapt it for a larger shuttle

II —Cost —The whole loom used at Serampore is almost the same as is used in Europe only it is more roughly made and costs from Rs 25 to Rs 35 It is easier to weave good cloth on this loom but it is not necessary to have this kind of loom in order to use the fly shuttle The part of the loom which contains the fly shuttle can be adapted to the native loom at a cost of about Rs 7 or Rs 8 and even less The Serampore loom has been adopted by many thousands of native weavers in Bengal who have doubled their earnings by the use of it

III —Description of the European Hand loom and of Fly shuttle and method of working it —The illustration shows the whole loom as used in Europe the part of the loom containing the fly shuttle which is called the lay as used at Serampore and the fly shuttle itself There are three drawings of the shuttle showing the side the top and the bottom It is generally about 14 inches long and the ends of it are of iron and it has two iron wheels fixed underneath The shuttle is placed in one of the shuttle boxes on the right or left end of the lay The two pieces of wood 2 2 are moveable The top of these slides along the iron rods 1 1 which must be kept oiled so that the pieces of wood move along them easily The bottom runs in a groove in the bottom of the shuttle box The strings shown in the illustration pass through these pieces of wood near the bottom and are fastened by a knot To work the fly shuttle one of the pieces of wood say that on the right is pushed back to the further end of the shuttle box and the shuttle is placed in the right hand box Then the weaver pressing down one treadle so as to open the threads of the warp pulls the handle 3 quickly towards the left The shuttle is thus jerked through the warp into the left shuttle box The weaver then presses down the other treadle to cross the threads of the warp and pulling the handle towards the right, sends the shuttle back into the right shuttle box By repeating this simple operation the whole weaving is done

IV —Time required to become expert with the Fly shuttle —A skilled weaver can become fairly expert in the use of the fly shuttle in less than a month The chief thing to learn is to pull the string evenly and with the right amount of force If it is jerked too violently or not smoothly, the thread in the shuttle is broken and much delay is caused

V —Importance of teaching the use of the Fly shuttle —According to the census of 1891 there are about 380 000 weavers (males) in Bengal alone If the earnings of each weaver could be increased only by Rs 2 a month which is a low estimate of what might be obtained by the use of the fly shuttle it would be a gain to the Province of Rs 63 20 000 a year These figures are sufficient to show the importance to Bengal and to the whole of India of this invention, which has been used in Europe for 150 years

E B HAVELL